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AUTOMATION AND UNEMPLOYMENT.

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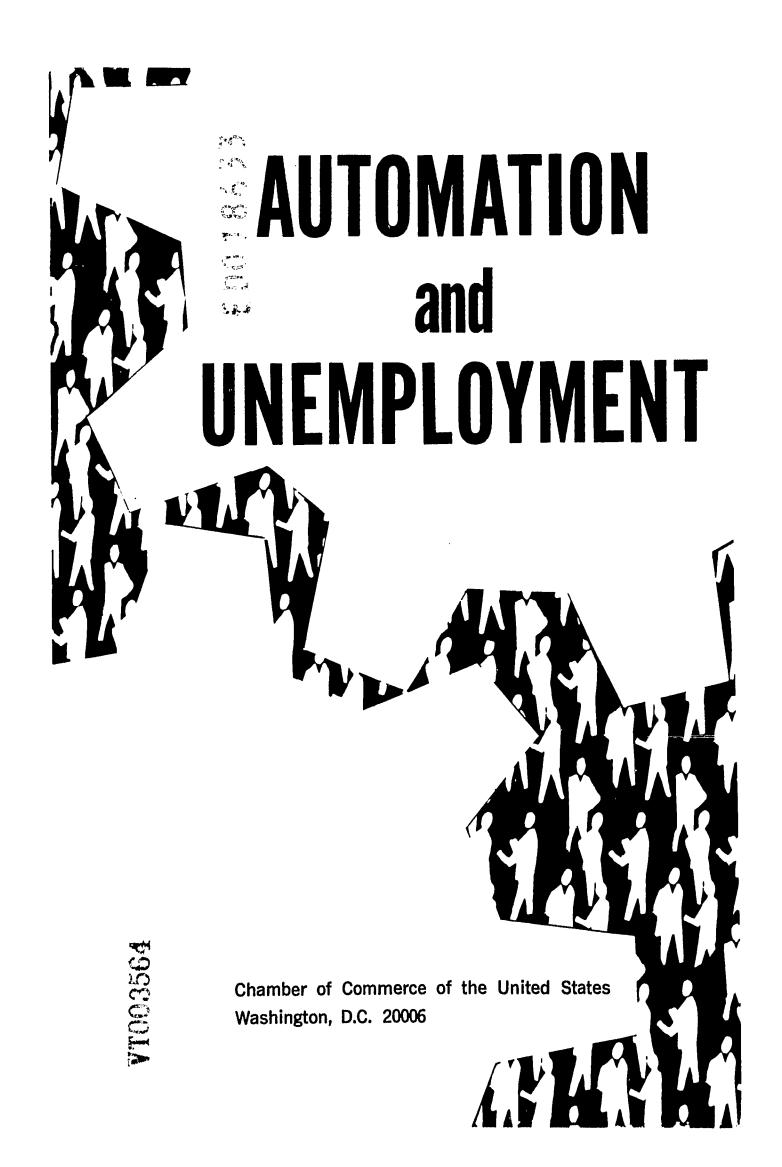
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DESCRIPTORS- *UNEMPLOYMENT, UNEMPLOYED, *AUTOMATION, *MANPOWER UTILIZATION, JOB TRAINING, RETRAINING, *MANPOWER DEVELOPMENT, WORKMANS COMPENSATION, DEPRESSED AREAS (GEOGRAPHIC),

HIGH UNEMPLOYMENT RESULTS IN ECONOMIC LOSSES TO THE ECONOMY AND IMPOSES SUFFERING ON MILLIONS OF INDIVIDUALS AND FAMILIES. OF THE MANY TYPES, LONG-TERM STRUCTURAL UNEMPLOYMENT AFFECTS MORE THAN ONE MILLION WORKERS AND IS MOST INTRACTABLE TO TREATMENT AND DISTURBING IN TERMS OF HUMAN HARDSHIP. MOST OF THE WORKERS CLASSIFIED AS STRUCTURALLY UNEMPLOYED ARE WITHOUT WORK FOR MORE THAN 26 WEEKS AND ARE OFTEN EMPLOYED IN THE AUTOMOBILE, AIRCRAFT, STEEL, AND TEXTILE INDUSTRIES, AND IN COAL MINING. OF THE BASIC APPROACHES TO THE PROBLEM OF STRUCTURAL UNEMPLOYMENT, THAT OF SPEEDING AND FACILITATING THE MOBILITY OF RESOURCES, BOTH LABOR AND CAPITAL, FROM DECLINING TO EXPANDING PRODUCTS, INDUSTRIES, OCCUPATIONS, AND AREAS BOTH REDUCES THE COSTS OF ADJUSTMENTS AND SPEEDS PROGRESS. IT CREATES AND NOURISHES BETTER PAYING JOBS. SOME POLICY QUESTIONS TO BE CONSIDERED IN SOLVING UNEMPLOYMENT ARE UNEMPLOYMENT COMPENSATION, PROVISION OF INCOME SECURITY, TRAINING AND RETRAINING, PROVISION FOR THE UNEMPLOYABLE, IMPROVEMENT OF DEPRESSED AREAS, IMPROVEMENT OF LABOR MOBILITY, AND CREATION OF CONDITIONS FOSTERING ECONOMIC GROWTH. THE MOST PROMISING LONG-RUN APPROACH TO SOLVING STRUCTURAL UNEMPLOYMENT LIES IN PRIVATE AND PUBLIC POLICIES WHICH STIMULATE OPTIMUM ECONOMIC GROWTH UNDER COMPETITION, FLEXIBILITY, CONFIDENCE, AND PRICE LEVEL STABILITY. A LIST OF SELECTED READINGS IS INCLUDED. THIS DOCUMENT IS AVAILABLE FOR 50 CENTS FROM CHAMBER OF COMMERCE OF THE UNITED STATES, 1615 H STREET, N.W., WASHINGTON, D.C. 20006. (WB)

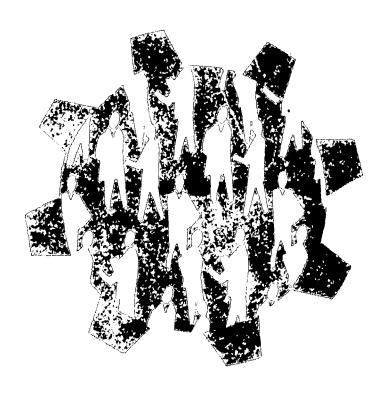




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AUTOMATION and UNEMPLOYMENT



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March 1967



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AUTOMATION AND UNEMPLOYMENT*

UNEMPLOYMENT IS AS MUCH on our minds as any domestic problem. High unemployment inflicts economic losses on our country; more than this, it imposes suffering on millions of individuals and families.

There is wide consensus on the basic facts of unemployment and its incidence by age, sex, race, skill, region and economic sector; it is not necessary to repeat commonly accepted facts.

There is also general agreement, although sometimes ignored, that unemployment is not one but several problems, requiring different policies; and there is some consensus on the proximate causes of the several types of unemployment.

Opinions diverge on the relative importance of the different kinds of joblessness and begin to clash when attention turns to palliatives and solutions. Long-term structural unemployment is the type most intractable to treatment and most disturbing to us in terms of human hardship. This analysis concentrates primarily on this type of unemployment and on measures to cope with it. But first, let's note the other types.

Types of Unemployment

Seasonal unemployment alone may account for as much as 20% of total unemployment. It is less of a problem than structural unemployment because it is regular, predictable, and periodically and partially self-eliminating. Perhaps there is not too much more that can be done to reduce it. Many employers have developed supplementary off-peak lines and have diversified their operations. Workers have successfully found alternative employments in off-seasons. Some prefer seasonal jobs. When only demand is seasonal, and the products can be economically stored, production may be stabilized on a year-round basis and often already is. When conditions of supply themselves are seasonal, or the product is not storable, less can be done directly in many cases. The decline of agricultural employment reduces the scope of this problem; the growth of seasonal services, such as the tourist industry, may pro-

^{*} Based on testimony of Dr. Emerson P. Schmidt, April 12, 1961, before the House Committee on Education and Labor, Subcommittee on Unemployment and the Impact of Automation. Minor editorial changes were made to improve the analysis and continuity. Dr. Charles T. Stewart, Research Economist, did most of the research and writing.

vide employment continuity opportunities in cases. Farmers earn \$5 or \$6 off the farm for each \$10 of farm income.

Cyclical unemployment (or recessional) has been our main concern since the painful experience of the 1930's. It is still a major problem. Its present volume can be estimated only roughly. Dr. Walter W. Heller, Chairman of the President's Council of Economic Advisers, suggested that of the 6.8% unemployed in February 1961 (seasonally adjusted figures), 2.8% or about 2/5 is primarily recessional, and the remaining 4% is frictional and structural.

Recession unemployment, however, no longer monopolizes our attention because concern with the structural problem has grown, and because we have experienced modest success since World War II in limiting the severity and duration of recessions. Unemployment compensation reduces personal hardships; monetary and fiscal policy keep business declines within bounds. Perhaps most important is the wide realization that business slumps are not laws of nature or acts of God beyond our understanding and control, and the assumption by government of responsibility for countering recession. Thus confidence is not destroyed at the first sign of a decline, and persistence of confidence is a vital factor in keeping recessions mild and short. The National Chamber has published a dozen reports on ways and means of counteracting cyclical instability, such as Can We Depression-Proof Our Economy?

Better and more timely information, including detailed data on inventories, would increase the effectiveness of fiscal and monetary policy and help business executives to mitigate inventory instability. The automatic stabilizer (or snubber) action of the federal budget could be improved. But the problem is understood, and rough tools are at hand. The 1960-61 recession was the first in which employment did not decline, but on the contrary continued to rise. Our main task ahead is reducing the frequency of recessions, although their severity could be further reduced.

Reduction of cyclical unemployment is a condition for coping with the structural problem. But business prosperity does not eliminate structural displacement of workers; indeed, on the contrary, it may accelerate displacement. Sustained prosperity, however, vastly facilitates the re-employment of the displaced workers so that contra-cyclical and economic

growth policies—private and public—are undoubtedly the most rewarding remedies for structural and automation unemployment.

Frictional unemployment may look impressive in mere numbers—possibly one-third of our total unemployed—but it is quickly deflated when weighted by the duration of unemployment. Furthermore, it is not generally realized that (at the last count—1952) some 3.2 million persons left the labor force per month and about 3.2 million entered the labor force per month, a total of about 38 million per year. (See chart) Nearly all of these leave and enter the labor force voluntarily (average civilian labor force in 1952 was 63 million). The figures do not allow for duplicates (that is, a person leaving and entering the labor force several times within a year). Thus, a much larger number of people than is commonly assumed do not want year-round continuity of earned income or jobs. This movement complicates the problem of measuring accurately both employment and unemployment.

Most frictional joblessness is of short duration as workers change jobs, advance up the occupational ladder, move from place to place, enter or leave the labor force. A substantial proportion of frictional unemployment is voluntary (10% of total unemployment in 1955-57 was voluntary). Most workers entering the labor force pass through a period of job-seeking before they land their first job. New entries in the labor force accounted for one-fifth of total joblessness in 1955-57. Since the number of new entries in the 1960's will be 40 to 50% greater than in the 1950's, we can expect some increase in unemployment rates from this cause alone, by as much as 200,000 annually.

This type of unemployment is increased, not reduced, by prosperity; ample job opportunities attract new entries to the labor force, and encourage voluntary mobility between jobs and occupations—with some loss of time.

Finally, then, we come to structural unemployment. How large is it? Unfortunately the concept, the definitions, do not correspond to statistical categories. Most of those unemployed more than 26 weeks are structurally unemployed, but some are victims of recession. Some of the short-term joblessness is structural.

We can safely say that much of the unemployment in coal

GROSS CHANGES IN LABOR FORCE, 1952

(Sums of the 12 month-to-month changes, and therefore contains duplications. Civilian non-institutional population, 14 years of age and over.) Unemployed persons finding jobs during year, 8.4 million UNEMPLOYED **EMPLOYED** Average for year 1.7 million Average for year 61.3 million Employed persons losing jobs during year, 7.8 million. Para persons leaving the force Posson not in the contract of NOT IN LABOR FORCE Average for year: SOURCE: Annual Report on the Labor Force, 1952, Keeping house......33.3 million In School 6.1 million Bureau of the Census Retired, voluntarily idle, seasonal workers during "off" season, etc...... 7.3 million

Total......46.7 million

4



mining, in the auto and aircraft industries and possibly in steel and textiles, is structural.

The total probably exceeds one million and may have been growing larger over the years. Part time and underemployment may hide some of the problems. The total figures, however, are not very meaningful for remedial policy. They include workers recently displaced as well as workers displaced last year or even earlier. We need information on the rate of displacement: the number of workers in any year who become structurally unemployed, as well as on the backlog of those who have not been re-employed.

Re-employment generally involves some up-grading, but a shift to services may lead to down-grading. While it is generally argued that structural unemployment due to mechanization, including automation, is increasing rapidly, this conclusion may in fact be a myth. Our entire history is one of rapid and basic change.

The late Dr. Charles Beard, economic historian, opened one of his books with the statement that if a man had died in 400 A. D. and returned to earth 700 years later, he'd find much that was familiar. But the last 200 years, on the contrary, have involved persistent change.

The sewing machine revolutionized the making of apparel. Lighting by kerosene, beginning about 100 years ago, destroyed the value of skills and plants committed to other methods. The steam engine displaced much manual power and power from wind and animals. Later the internal combustion engine, including the diesel engine, replaced the steam engine. The electric motor, including the fractional horsepower motor, called for learning new skills and for new investment. The motor car, bus and truck as long ago as the first quarter of the 20th century altered fundamentally our way of life and again called for the learning of many new production and operating skills. Synthetic fibers have had the same results. The list is endless.

The opening of the Suez canal about 100 years ago made obsolete much of the existing shipping facilities, docks and wharfs. Tens of millions of dollars of investment in older shipping facilities had to be written off. Again new skills had to be learned.

A careful examination of economic change in the past 100

years throws considerable doubt on the commonly held view that we are facing something new; rather, what may have happened is that the normal and traditional problems of economic evolution have become political problems.

Even automation is not new at all, even though its rate of application is rising and its form is changing. The hydraulic ram, a device developed in the 18th century for lifting water, was completely automatic. The thermostat, controlling room temperature, has been in use for three quarters of a century. The windmill, in a sense automatic, is very old. Long before 1800 an automatic flour mill was in operation.

The press is full of stories of mechanization and automation and labor displacement. But to gain perspective, it might be interesting to guess the date when the following was written:

The power to excavate earth, or to excavate and blast rock, is from five to ten times as great as it was when operations for the construction of the Suez Canal were commenced, in 1859-'60. The machinery sent to the Isthmus of Panama, for the excavation of the canal at that point, was computed by engineers as capable of performing the labor of half a million of men.

The displacement of muscular labor in some of the cotton mills of the United States, within the last ten years, by improved machinery, has been from thirty-three to fifty percent, and the average work of one operative, working one year, in the best mills of the United States, will now, according to Mr. Atkinson, supply the annual wants of 1,600 fully clothed Chinese, or 3,000 partially clothed East Indians. In 1840 an operative in the cotton mills of Rhode Island, working thirteen to fourteen hours a day, turned off 9,600 yards of standard sheeting in a year; in 1886 the operative in the same mill made about 30,000 yards, working ten hours a day. In 1840 the wages were \$176 a year; in 1886 the wages were \$285 a year.

The United States census returns for 1880 report a very large increase in the amount of coal and copper produced during the ten previous years in this country, with a very large comparative diminution in the number of hands employed in these two great mining industries; in anthracite coal the increase in the number of hands employed having been 33.2 per cent, as compared with an increase of product of 82.7; while in the case of copper the ratios were 15.8 and 70.8, respectively. For such results, the use of cheaper and more powerful blasting agents (dynamite), and of the steam drill, furnish an explanation. And, in the way of further illustration, it may be stated that a carload of coal, in the principal mining districts of the United States, can now (1889) be mined, hoisted, screened, cleaned, and loaded in one half the time that it required ten years previously.

The report of the United States Commissioner of Labor for 1886 furnishes the following additional illustrations:

In the manufacture of agricultural implements, specific evidence is submitted, showing that six hundred men now do the work that, fifteen or twenty years ago, would have required 2,145 men—a displacement of 1,545.

The manufacture of boots and shoes offers some very wonderful facts in this connection. In one large and long-established manufactory the proprietors testify that it would require five hundred persons, working by hand processes, to make as many womens' boots and shoes as a hundred persons now make with the aid of machinery—a displacement of eighty per cent.

Another firm, engaged in the manufacture of children's shoes, states that the introduction of new machinery within the past thirty years has displaced about six times the amount of hand-labor required, and that the cost of the product has been reduced one half.

On another grade of goods, the facts collected by the agents of the bureau show that one man can now do the work which twenty years ago required ten men.

In the manufacture of flour there has been a displacement of nearly three fourths of the manual labor necessary to produce the same product. In the manufacture of furniture, from one half to three fourths only of the old number of persons is now required. In the manufacture of wallpaper, the best evidence puts the displacement in the proportion of one hundred to one. In the manufacture of metals and metallic goods, long-established firms testify that machinery has decreased manual labor 33½ per cent.

In 1845 the boot and shoe makers of Massachusetts made an average production, under the then existing conditions of manufacturing, of 1.52 pairs of boots for each working day. In 1885 each employee in the State made on an average 4.2 pairs daily, while at the present time in Lynn and Haverhill the daily average of each person is seven pairs per day, "showing an increase in the power of production in forty years of four hundred per cent."

The business of making bottles has been arduous and unhealthy, with a waste of about thirty-three per cent of the "melting"; and, although this waste is used afterward, there is a deterioration in its quality from its employment a second time. For many years this specialty of industrial production experienced little improvement; but it finally commenced in the substitution in 1885 of the so-called Siemens "tank" furnace, in place of the old-fashioned "coal" furnace for the melting of glass; one of the former supplanting eight of the latter; requiring four men in place of twenty-eight to feed it, producing 1,000,000 square feet of glass per month, in place of a former product of 115,000 feet, and working continuously, while the coalfurnaces work on an average but eighteen days per month. Such an improvement in the methods of manufacture, as might be expected, revolutionized the former equilibrium, in this department of the glass industry as respects the supply and demand of both labor and product, and occasioned serious riots among the glass-workers of Charleroi, in Belgium, where it was first introduced. The process of producing the bottle by "blowing" was not, however, affected by the above-noticed improvement; but within the last year (1888) a practical method of producing bottles is reported as having been invented and practically applied in England, which now bids fair to entirely do away with the process of "blowing," with an accompanying immense increase of daily product and a corresponding reduction in the former cost of labor.

The following are other notable results, in what may be termed

the minor industries:

In the manufacture of jewelry, one skilled workman, paid at the rate of two and a half to three dollars per day, and working according to ante-machine methods in use a few years ago, could make up three dozen pairs of sleeve-buttons per day. Now, one boy, paid five dollars per week, and working on the most modern machinery, can make up nine thousand pairs in a day. In gold (or imitation gold) chainmaking, the United States now exports the cheapest grade of such jewelry produced by machinery to Germany, where cottage handlabor, in the same vocation, can be had for a pittance, and finds a ready sale for them as against German manufacturers.

In connection with a new (1889) issue of notes by the Bank of France, for which superiority over anything of this kind heretofore achieved is claimed, and which engravers and chemists believe can not be imitated except at such an expenditure of time and money as would effectually check all effort in this direction, it is also added that they have been produced in a twentieth part of the time spent

on those which are now being withdrawn from circulation.

Nothing has had a greater influence in making possible the rapidity with which certain branches of retail business are now conducted, as compared with ten years ago-more especially the sale of groceriesthan the cheap and rapid production of paper bags. At the outset, these bags were all made by hand-labor; but now machinery has crowded out the hand-workers, and factories are in existence in the United States which produce millions of paper bags per week, and not unfrequently fill single orders for three million. Paper sacks for the transportation of flour are now (1889) used to the extent of about one hundred millions per annum; and to this same extent have superseded the use and requirement of cotton sacks and of barrels. With machinery have also come many improvements: square bags that stand up of themselves, and need only when filled from a measure to have the top edges turned over to make the package at once ready for delivery. A purchaser can now also take his butter or lard in paper trays that are brine and grease proof; his vinegar in paper jars that are warranted not to soak for one hour; a bottle of wine wrapped in a corrugated case that would not break if he dropped it on the pavement, and his oysters in paper pails that will hold water overnight. A few years ago, to have furnished gratuitously these packages, would have been deemed extravagance; but now it is found to pay as a matter of business.

The increase in the producing capacity of the United States in respect to the manufacture of paper during the years from 1880 to 1887 inclusive, was also very striking, namely: in number of mills, twenty-five per cent; in product, sixty-seven per cent; in value of product, twenty-seven per cent. The reduction in the prices of paper in the United States under such circumstances has been very great,

and since 1872, for all qualities, full fifty per cent.

The sobriquet of an apothecary was formerly that of a pill-maker; but the modern apothecary no longer makes pills, except upon special prescriptions; inasmuch as scores of large manufactories now produce pills by machinery according to the standard or other formulas, and every apothecary keeps and sells them, because they are cheaper, better, and more attractive than any that he can make himself.

Certain branches of occupation formerly of considerable importance under the influence of recent improvements seem to be passing out of existence. Previous to 1872, nearly all the calicoes of the world were dyed or printed with a coloring principle extracted from the root known as madder; . . .

The foregoing was written in the 1880's and published in 1889, Recent Economic Changes by David A. Wells (D. Appleton and Co., N. Y.).

This should give us somewhat better perspective on current press stories of change, mechanization, automation and capital losses in human skills and other capital and labor displacement.

In fact, it could easily be shown that public concern with automation is itself a cyclical phenomenon: when the economy is operating at high levels and expanding rapidly, automation is taken largely in stride; when recession strikes, the press bulges with "case histories" and stories of change and displacement. A little more knowledge of our economic history would provide us with better perspective.

Structural Unemployment

Structural unemployment is eased but not eliminated in prosperity; it does not respond fully to the purchasing power cure of monetary ease, reduced tax burdens, or, as some suggest, expanded government spending. The structural problem has several components. The most familiar is technological unemployment: Labor is displaced by mechanization, as in coal mining, or also by automation, as in much manufacturing. Automation is a scare-word to some, but its labor displacing effect is small compared to that of the broader process of mechanization and technological improvement of machines, materials and methods. These processes may create, and in the past have created, more job openings than they destroyed,

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but they were jobs requiring different skills and often in different locations.

Demand for particular kinds of manpower may also fall because of a decline in demand for its product, or because of a failure of demand to grow. Thus the shift in demand from coal to oil and gas has also contributed to unemployment in the coal mines. A shift in demand from domestic to foreign textiles has aggravated the problems of our domestic textile industry; a shift in consumer demand from standard to compact cars has reduced the demand for steel and other materials as well as the labor requirements per car.

In more general terms, the demand for technical, managerial and professional labor has been growing rapidly; the demand for unskilled labor has been declining. The composition of the supply of labor has not changed in pace with the composition of demand; there is a lag in adjustment. Thus there is a shortage of many kinds of highly-trained labor and strong upward pressure on their wages; there is a surplus of unskilled and semi-skilled labor, with high unemployment rates. In February 1961 the unemployment rate for professional, technical and kindred workers was 2%, but for common labor it was 19.3%. During the 1960's the demand for professional and technical labor is expected to grow by 40%; the demand for unskilled labor is not expected to grow at all. Yet it is estimated that of the 26 million new entries into the labor force in this decade, $7\frac{1}{2}$ million will lack a high school education, and $2\frac{1}{2}$ million will not have completed elementary school. Thus the prospects are for rising unemployment rates among new entries.

The Problems

Our concern with structural unemployment (and for that matter with unemployment of whatever cause) derives, first, from the hardship it imposes on the victims and their families; and second, from the losses in real income and output which it inflicts on the economy.

The relief of undue hardship and the recovery of employment and output go hand in hand, but they are distinct objectives. Jobs, however, are not an end in themselves. Employment, productive employment, is a means of providing the income and output to satisfy the diverse needs and desires

of people. These distinct objectives, relief and recovery, call for different policies, or at least different emphasis. This should be clear from the fact that rapid growth in income and output increases the rate at which labor (and capital) needs to shift and is displaced.

Alternative Approaches

There are three basic approaches to the problem of structural unemployment: (1) eliminate the causes of declining products, industries, methods and occupations; (2) reduce the need for adjusting to changing technology and market demands; (3) speed and facilitate the mobility of resources, both labor and capital, from declining to expanding products, industries, occupations and areas.

The first approach we all reject. It implies a moratorium on progress and change and a consumption-strait jacket on the fickle consumer whose discretionary income is now spent one way, now another.

The second approach (reducing the need for readjustment) can be either good or bad. Efforts, particularly palliative efforts, to raise the demand for declining industries and occupations by finding or developing new uses for their products or new markets may be desirable, although it is questionable in most of the serious cases that they will carry us far toward solution. On the other hand, efforts to raise demand by unnecessary government procurement, by discriminatory restrictions, rigid trade barriers against foreign supplies, by subsidized sales, are steps in the wrong direction. So also are efforts at monopolistic restriction of output and entry.

The third approach, increasing mobility of resources, both reduces the costs of adjustment and speeds progress. It creates and nourishes better-paying jobs. In what follows, a number of policy questions are discussed, keeping in mind these three basic approaches and our two objectives of reducing hardship and raising productive employment and real income.

Unemployment Compensation

A main purpose of unemployment compensation is to mitigate short-run wage losses and to prevent undue hardship among the unemployed and their dependents. With this objective in mind, the level of unemployment benefits should quite

properly reflect the cost of providing a basic floor of protection. The Consumer Price Index is not designed to measure the cost of providing the essentials to the unemployed, but the cost of "a market basket" of a typical employed urban family of four. Some feel that it might be advisable to adjust benefits to reflect the number of dependents of the unemployed head of a household, although clearly such adjustments could invite abuse and penalize the employment of men with many dependents. Some states already have dependency allowances financed by payroll levies on employment—levies which penalize job-making.

Unemployment compensation also contributes to checking declines of economic activity by reducing the decline of sales. This is an incidental effect; higher benefits or longer benefit periods cannot be supported as anti-recession measures. They are recession-snubbers—not employment stabilizers. There are much more effective ways of reducing general declines and speeding recoveries. The unemployed do not spend their unemployment compensation on new houses, new cars or other durables—sectors in which recessional unemployment is most pronounced; if they did then higher benefits might be an effective way of stimulating recovery. Rather, they spend on food, whose production we do not want to stimulate further, on rent, on utilities, on debt servicing. These types of expeditures do not have a high leverage for economic recovery.

Most important, unemployment compensation does not cure unemployment; it is a stopgap measure intended mainly to cope with the human problems engendered by short-run declines in economic activity. Even in dealing with cyclical unemployment, unemployment compensation may have adverse side-effects. It may create some additional unemployment, prolong the duration of unemployment needlessly and discourage some re-employment because of the payroll tax costs.

Some workers in seasonal industries, as well as some in-andout members of the labor force who normally work for only part of any year, have come to regard unemployment compensation as a fringe benefit. They may remain in the labor force as unemployed whereas otherwise they would leave it. Some may leave their jobs sooner than they would otherwise. Their numbers are not known, and there does not seem to be any way of preventing this unintentional and minor side-effect of the unemployment compensation program. Others, whose numbers are also unknown, remain unemployed longer than they would otherwise prefer, using their benefits as a prolonged vacation at part pay. Any increase in the amount of benefits, any easing of the eligibility requirements, any prolongation of the benefit period, will aggravate unemployment compensation abuses, however proper it may be on other grounds. Since unemployment compensation is not subject to income tax, whereas wages are, an increase of benefits (as has been suggested) to two-thirds of the individual's prior earnings could create a substantial new leisure class. After all, leisure is valued by most of us, and costs of living for the employed are higher than for the unemployed.

Far more serious is the effect of higher unemployment compensation costs to the employer in postponing and reducing re-employment during a recovery period. Under experience rating, which we firmly support because it encourages steadier jobs and preserves the funds for those who are in the labor market and who are unemployed through no fault of their own, it can prove expensive, however, to add workers to the payroll until there is a good prospect that they will not have to be laid off again soon. The employer will prefer to pay overtime to workers already employed rather than incur the risk of high unemployment compensation and other fringe costs of employing additional workers. Thus recovery itself can be appreciably slowed and re-employment is delayed.

The administration of unemployment compensation which helps workers make necessary and normal adjustments and at the same time relieves individual hardship may promote labor mobility. States should be encouraged to improve reciprocal arrangements regarding unemployment compensation so that the applicant knows that he is not required to remain in the state to draw his compensation. Careless administration of unemployment compensation, or an unduly narrow spread between net wages and tax-free unemployment compensation benefits may, however, reduce mobility in the short run by creating an incentive to use up unemployment compensation.

The purpose of unemployment compensation is to prevent hardship, not to promote mobility or provide jobs. Wellmeaning attempts to diminish hardship in areas of chronic labor surplus by extension of unemployment compensation do not attack the basic problem and, indeed, may postpone its solution. Many countries have provided extension of unemployment compensation beyond a certain period contingent on retraining and stricter limits on the types and locations of jobs which the recipients are permitted to turn down without loss of entitlement.

Providing Income Security

The worker depends on his paycheck almost from week-to-week to maintain himself and his family. It is understandable that he should fight any threat to his job, even at the cost of progress for the community at large. It may be rare that efforts to block change or the adjustments dictated by progress are motivated by a desire to establish a labor monopoly and to profit by it. Rather, the initial motive may be defensive: to protect men's livelihood. Only after this motive has been met does concerted opposition to change and adjustment become a defense of sloth, the status quo or entrenched privilege.

It is in the interest of all of us to provide as much security to the worker as is compatible with progress and freedom. It is also in the common interest to help the worker to direct his struggle for security in helpful rather than in harmful directions. In its crudest and most harmful form, the struggle for security takes the form of opposing changes which displace labor: work rules which prevent the adoption of new methods and equipment; the objective is job maintenance. Building codes may forbid the use of new materials, craft unions may prevent adoption of equipment, tools and stand-

ards which would require less labor.

A second approach to security aims at employment maintenance. The employer may introduce improved methods and equipment, but he may not be allowed to drop the workers thus made superfluous. Here we have the most blatant forms of featherbedding: payment for work not done and not required, such as locomotive firemen on diesel locomotives, standby orchestras and the like. The third approach to security for the worker is the preferable one of income maintenance. This too may be abused, as in union demands that discharged workers be paid for a period of five years. Such demands force employers to think twice before hiring new personnel and this discourages job-making.

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One form of income maintenance is unemployment compensation for a stated period. This includes state unemployment compensation programs, and in some cases supplementary payments also financed by the employer and occasionally by employee contributions, or by both. Severance pay is another form of short-run income maintenance. These are obviously stopgaps and raise costs to consumers—among whom workers themselves are the most numerous.

Long-run assurance of real income can only come through re-employment in *productive* jobs. Here the approaches are many, indirect, and not certain to work in every individual instance. The employer forced to discharge some workers may give them advance notice to help facilitate adjustment. He may give them prior consideration for other jobs. He may notify other employers in the community, or employment exchanges, both governmental and private. Often the process of technological progress will create job openings in the very plants in which some displacement occurs.

Where the firm must train workers to fulfill new tasks which technology creates, it may give preference to displaced workers as trainees. Indeed, this is common, rather than rare. More generally, programs for training or retraining, whether conducted by employers, by unions, by local school systems and by other agencies, contribute to income maintenance and, indeed, real income improvement. No one pretends that these diverse approaches toward income maintenance are adequate; but they are the directions in which we ought to move.

Training and Retraining

We must abandon the old-fashioned notion that education is ever completed. The skills and knowledge possessed at the age of 20 cannot be assumed to remain undepreciated for a working lifetime.

The rate of obsolescence of skill and knowledge is rapid, and may speed up, not slow down. It will apply to a wider range of tasks, and to a much larger segment of the labor force, for most will be skilled. Possibly retraining and upgrading are growing problems. In earlier times, it is generally assumed, when most workers were semi-skilled at best, they could transfer from declining to expanding trades and industries with relative ease and little loss of skill or earning

power. But there were always, and are, many exceptions. The unemployed coal miner, for example, highly skilled and well paid at his trade, is an unskilled worker elsewhere.

By training we mean something more limited than education. We mean preparation for gainful employment. Education has much broader functions: to acquaint each generation with its heritage, to prepare it for responsible living in society, to enhance the quality of life experience, as well as to prepare a new generation for gainful occupations to replace the old.

Most acquisition of new work skills comes on the job, not in school.* This is true, to a large extent, even of professional and technical personnel. Dissemination of new knowledge and skills would proceed at a snail's pace if it depended on new entries in the labor force, who are a very small proportion of the total and only slowly work themselves into positions of responsibility. The greater part of the supplies of new skills is the product of self-education, of work experience, of training programs conducted by firms, by unions, by governments (the Armed Forces are very important in this respect), not of the formal school system.

Training programs must be expanded and improved. They may compete to a limited degree for facilities and personnel with the formal educational system, but much less than might be supposed. It is now clear that the shortage of public classrooms and of teachers for formal education is, or was, a peakload problem; that the peak is past, and that current rates of school construction and annual increments in the teaching force are adequate to anticipated needs, even though local shortages, here and there, may persist. Shortages of teachers and supervisors who can impart new skills now in short supply will continue. Their services will always be in great demand for uses other than teaching.

The main problem will not be the resources for retraining and replacing obsolete skills, but the knowledge of how to use

^{*&}quot;... Surprisingly little is known about on-the-job training in modern industry. About all that can be said is that the expansion of education has not eliminated it. It seems likely, however, that some of the training formerly undertaken by firms has been discontinued and other training programs have been instituted to adjust both to the rise in the education of workers and to changes in the demands for new skills. The amount invested annually in such training can only be a guess. H. F. Clark places it near to equal to the amount spent on formal education. Even if it were only one-half as large, it would represent currently an annual gross investment of about \$15 billion." (Estimate based on comments made by Harold F. Clark at the Merrill Center for Economics, summer 1959.)—Theodore W. Schultz, "Investment in Human Capital," THE AMERICAN ECONOMIC REVIEW, March 1961, page 10.

these training resources to best advantage. When a business firm sets up a training program to provide skills not available on the labor market, or to retrain displaced workers for available openings, it knows what skills it needs and roughly how many workers it should train for them. But when government agencies undertake training and retraining programs, they lack such analyzed knowledge of the prospective demand for skills. Vocational programs in high schools may train excessive numbers of students in tinsmithing or carpentry, but few if any in the expanding skill requirements of medical technicians or of the electronic and nuclear age. In part this misdirection is due to a cultural lag, the shortcoming of teachers whose skills are obsolete. (These programs, incidentally, are heavily financed by U.S. Treasury funds; such is not a solution.) In large part, we lack the detailed knowledge of present and prospective market demand for specific skills; the guidance of teenagers-and adults-is correspondingly incomplete. A government bureau in Washington, concerned with the country as a whole, may unwittingly do more harm than good.

We have some good data on the number of persons without jobs, their geographical location, their occupations and their industries. We need data with comparable or greater detail on job openings available, by occupational classification and location, particularly prospectively. Such information could guide training and retraining efforts and vastly improve the process of re-employing displaced workers. It would not solve all problems; we would still have to reconcile job opportunities with educational freedom and occupational choice; reconcile expanded occupational training efforts with the other aims of education.

We may not be able to make full use of the skills and abilities in short supply (and likely to grow scarcer) if we do not encourage wider wage differentials by skill, after tax, than we now seem willing to tolerate. But knowledge of current and prospective job openings by skill, number, and location would carry us a long way toward minimizing structural unemployment. The free labor market, with wages and galaries free to motivate and direct training and retraining, will strengthen our industrial complex and create an increased number of better-paying jobs.

Who is responsible for retraining displaced workers and

meantime providing some income maintenance? The employer whose innovation has displaced them, rendering their skills obsolete or redundant? the workers themselves, whose labor is no longer in demand? or society at large? The latter is concerned with preventing loss of the output and income which these workers can potentially contribute, and to mitigate the human suffering which chronic unemployment inflicts on the displaced workers and their dependents and the resulting deterioration of the communities in which they are concentrated.

From the viewpoint of ethics, all share responsibility, but the most practical distribution of the burden of change and progress probably cannot be determined once and for all. From an economic viewpoint, some tentative rules may be suggested. The employers should not be so heavily burdened with the costs of income maintenance and retraining that employment of manpower and economic growth and progress are deterred. The displaced workers should not be so heavily burdened that they and fellow workers, fearing displacement, will join forces to block progress through the collective bargaining process or through political action. The residual burden must be borne by society at large, in practice by state and local government, and private agencies, lest progress be slowed and its benefits to all be curtailed. But the individual self-interest motive for betterment is the most powerful engine we have; employers or government, in coming to the rescue, should harness this selfinterest and not paralyze it.

In some cases the residual burdens placed on society will be substantial; in other cases, zero. Consider two extreme cases. Some firms, large and diversified, are constantly introducing new products, materials, and methods which create demands for skills which do not exist in adequate quantities on the market. These same firms, in the process of innovation, are destroying jobs. They must establish their own training programs to provide the skills they need. It is in their interest to train displaced workers already on their payroll, to the extent these workers can be trained for the new job openings. Most firms, apparently, are doing just this.

In the case of displaced coal miners, on the other hand, the new job openings and skill requirements are in the oil and gas industries, in the coal mining equipment industry and elsewhere. They are not primarily in the coal mining region or industry, which cannot be expected therefore to assume the major burden of income maintenance and retraining of displaced coal miners. It may be in the interest of an employer, however, to facilitate re-employment by providing advance notice of forthcoming layoffs, by providing some other employment information to displaced workers, by directing them to training facilities and programs. Such measures moderate worker-resistance to change and thus speed our economic growth.

No one, to our knowledge, has made any reliable calculations of the costs and benefits of the various alternative ways of relieving depressed areas; but we suspect that a dollar spent on retraining has many times the impact of a dollar spent on loans and grants for industrial or community facilities. We would not be surprised if the \$4 or 5 million appropriated for retraining in the depressed areas measure approved by the Congress does more good than the rest of the appropriations combined. At least the potential is there, if the training is adapted to prospective labor market conditions and if the individuals undergoing retraining are such as can benefit from the expenditures.

The Unemployables

The structural unemployment problem is not solely one of workers whose skills are rendered obsolete or surplus by technological change and shifts in demand. There are some members of the labor force, whose numbers seem destined to grow, who are essentially unemployable. This is an unpleasant subject to raise in a country which subconsciously accepts the Lysenko theory of acquired characteristics: that anyone can become a responsible citizen and a skilled and productive worker through suitable education and training. Unfortunately this view is not correct.

Of the 26 million people who will enter the labor force during the next decade, as already noted, $7\frac{1}{2}$ million will not have completed high school and $2\frac{1}{2}$ million will not have completed even elementary school. Many of these have the capacity but lack the interest, the drive, the encouragement or the vocational counseling they need. Some who lack the type of intellect suited to conventional schooling have other abilities which may be valuable to the labor force of the

future. But unfortunately there are many who lack the capacity (or the behavior and personality traits) to be more than unskilled labor and some who lack even that.

In a typical population, roughly 23% have IQ's of less than 90; most of these cannot expect to become highly skilled or to be entrusted with responsible jobs; 7.3% have IQ's below 80, most of whom are at best marginally employable; 2.7% have IQ's below 70 and are strictly unemployable. Every indication we have of the shape of the future shows rising requirements of employability and therefore a growing percentage

of any age-group which is unemployable.

In addition to those who become unemployable because the new technology places higher demands on skill and responsibility, others become unemployable by statute. Every time we raise the minimum wage or extend its coverage to additional industries and occupations, some marginal workers become unemployable; others not yet in the labor force are denied the opportunity to work and to make some small contribution toward their own support and toward the output of society. We deny them not only income, but the self-respect which goes with holding a job and bearing a share of adult economic responsibilities.

In addition to the Fair Labor Standards Act, the depressionborn Walsh-Healey Act provides for payment of "prevailing minimum" wages, as determined by the Secretary of Labor, by all businesses with contracts of \$10,000 or more with the national government. The minima thus established are generally well above the FLSA minimum, and in some cases substantially above prevailing wage levels. The Davis-Bacon Act also requires payment of "prevailing" rates, as determined by the Secretary of Labor, by all construction contractors who do work for the central government in the amount of \$2,000 or more. These rates by decree apply to each of many skills; "minimum" rates as high as \$5.00 per hour have been required! Wage determinations have often been well in excess of prevailing rates in the relevant labor market. According to a government agency, the Small Business Administration, the Walsh-Healey Act "tends to raise wages throughout the country to the levels paid by large firms in the industrial areas without due regard to local economic conditions and to the financial problems of small businesses."

Wage-fixing by statute as in the case of the FLSA, or by decree, as in Walsh-Healey and Davis-Bacon, aggravates the structural unemployment problem in several ways; it increases the number who are unemployable; it prevents depressed areas from holding or attracting industry by offering lower wage costs; it hampers depressed industries, occupations and areas in expanding their sales through lower prices by imposing downward inflexibility on production costs. When Walsh-Healey and Davis-Bacon are incorporated in depressed areas and urban renewal legislation, they raise the costs of procurement or investment and reduce the benefits obtainable from it.

We forbid employment of children under 16; but we also require them to attend school until they reach this age and provide schools for them to attend. We also forbid anyone worth less than \$1.00 an hour from working in a covered employment; many propose to deny employment to anyone not worth at least \$1.25 an hour. What provisions do we have, or what provisions do we propose, to cope with the growing number of unemployables? This problem merits serious consideration.

Furthermore, raising wages at the minimum has a wage lifting effect on wages above the minimum; this makes direct labor relatively more expensive to employ and has dis-employment effects. The latter is also true of unecomonic wage-fringe levels demanded under collective bargaining. This problem was dealt with at length in a National Chamber report on *Productivity and Wage Settlements*.

Depressed Areas

Some structural unemployment may be found in any community, no matter how prosperous. Declining industries and obsolete skills are everywhere. It is not usually a problem of depressed "areas" but of depressed industries and occupations. Depressed areas happen to be those in which declining industries and occupations are a major part of economic activity. The geographic approach toward solution of structural unemployment problems is both inappropriate and relatively ineffective.

The problem of chronic unemployment in localized pockets may be approached by (1) bribing industry to move in and provide jobs for the unemployed, (2) bribing or persuading workers to move out to areas with better employment prospects, or to accept jobs in a new community, or (3) retraining workers for expanding occupations, with or without geographical migration of capital and labor.

These are not exclusive alternatives; all three policies may be pursued simultaneously. The proper emphasis varies from area to area, depending on its re-employment prospects, its attractiveness to outside industry and the availability of suitable job opportunities for displaced workers in other areas. By and large the national government has placed, and is still placing, undue emphasis on moving jobs in, and not enough on moving workers out. Retraining workers for new occupations has been under-emphasized.

The justification for government loans and/or grants to depressed areas rests on two explicit or implicit assumptions which are largely erroneous; (1) that sound investment opportunities exist in these areas which cannot or will not be financed by private business without a considerable subsidy from the taxpayer; (2) that national government grants and loans provide a *net* increase in investment and job opportunities for the economy as a whole. The second assumption really seems to assume that the leverage of taxpayer funds in depressed areas is greater than in areas which are not depressed—when the exact opposite is more likely to be true.

If a large number of labor-surplus areas persists in times of monetary ease and ample bank reserves such as in early 1961 and in various periods in the past, their need for credit is not based on over-all shortages of capital. Perhaps the private capital markets are not perfect; certain sound business investments are unable at times to obtain funds because of these imperfections. This is the claim in behalf of small business, which has obtained a hearing, and has resulted in the Small Business Administration and other government devices for supplying credit needs of small business; depressed areas legislation is out of order. There is a shortage of venture capital; but the main remedy for this shortage is tax reform and reduction, not depressed areas legislation.

The national government has had for years many programs intended to stimulate demand for labor in "labor surplus areas." Portions of defense contracts may be "set aside" for negotiation with firms in labor surplus areas. Preferential

treatment is granted to firms in such areas under the "Buy American" laws. Rapid tax amortization privileges were granted defense-related facilities constructed in labor surplus areas. The Small Business Administration gives priority and special consideration to loan applications from firms located in labor surplus areas. These policies are all designed to bias the geographical distribution of demand and investment in favor of labor surplus areas, i.e., to perpetuate existing locational patterns of population and productive resources.

These programs are sometimes quite useless because of their over-simplified definition of a labor surplus area in terms of unemployment rates. Where the unemployed are coal miners but new industry requires, say chemical technicians, it may actually import needed labor without materially relieving local unemployment. In some New England towns listed as chronic labor surplus areas, the industrial structure formerly dominated by textiles is now based on electronics and related industries. The towns are booming, with few job problems among younger workers. But the unemployment rate among older workers, many of them displaced textile workers, remains high. New industry may not be the answer. Retraining, geographical mobility and breaking the age barrier on hiring may be much more to the point.

We do not believe that it is economically sound to discriminate in favor of some areas and against others, and particularly to discriminate in favor of declining areas and industries at the expense of more promising expanding areas and industries. If a depressed area has not made any progress in spite of all these discriminatory measures in its behalf, it hardly seems a promising prospect for further subsidy. The situation calls not for more of the same, but for a change of medicines. There is no particular reason, furthermore, why every area and community should advance in lockstep at the national rate of advance. Some communities, like some firms, are uncompetitive. We do not attempt normally to prevent an uncompetitive firm from going out of business. The people in every depressed area should ask: "Why would any business in its right mind choose to locate in this community?" Often but not always, the answer would be, "It wouldn't." Government should not subsidize poor locations at the expense of good

locations. This is robbing Peter by more than we pay Paul,

for national efficiency is lowered.

Anti-pirating clauses in such legislation are both unworkable and meaningless. If a plant locates in one place, it fails to locate elsewhere. Any subsidy, whether we call it a grant or a loan, which does not increase aggregate demand, and particularly demand for the products of the plant or industry bribed to locate in a depressed area, inevitably means pirating. Yet there is not one iota of evidence that funds allocated to depressed areas have a higher employment multiplier than they would have had if left free to seek the most remunerative or productive uses. To stimulate investment and job creation, funds and managerial talent should go where they will do the most good, not necessarily where unemployment is highest.

The view that "all that is needed is a new plant" to solve the problem of an area in economic distress assumes that consumer demand to sustain it will be forthcoming. Even when consumer demand is forthcoming it does not necessarily follow that the new plant or industry will eliminate economic distress. In West Virginia billions of dollars have been spent since the end of World War II for industrial expansion, much of it in chemicals plants. But chemical production for the most part requires a relatively few highly skilled workers, not large numbers of ex-coal miners.

Even construction or availability of physical facilities will not necessarily attract new industry into an economically distressed area. New industry may be reluctant to move into the area for a variety of reasons. A poor "business climate," inadequate social facilities—schools, etc., and lack of the requisite skills among workers are among the obvious reasons, as we showed in our report Getting and Holding Good Employers (See bibliography, page 34).

In sum, U.S. Treasury loans and grants for investment in depressed areas will help these areas very little, and will on net balance harm the country at large. They will transfer resources from expanding to stagnant or contracting areas. They may slow national economic growth. Even in the depressed areas these funds may be largely wasted. For they will be used in part to attract industry which will contribute next to nothing to relieve local unemployment problems. They will be used in part to attract plants imposing demands on local facilities

heavier than their contributions to tax revenue. They will be used in part to induce plants to locate where they would have located anyway; and to induce expansion which would have

occurred in any case.

Funds used to develop community facilities will often be wasted, too, in terms of reducing unemployment. For the local conditions which attract one type of industry may only repel another type. Good schools and cultural facilities generally mean high operating and maintenance costs, thus high tax rates, and high wages. They attract research-type industries, but may repel other types (employing mainly semi-skilled labor) which are more concerned with wage rates and taxes than with good schools and cultural facilities. Yet funds will be available to develop community facilities which are inappropriate or even deterrent to the type of industry which the community is capable of attracting.

When an area needs a subsidy for both community facilities and new industry, it seems a very poor candidate for expansion.

Subsidies to plants locating in particular areas have long been used by state and local governments to speed industrialization as well as to relieve distress. Although subsidies, in the form of plant provided "rent-free," or tax exemptions for extended periods of time, have had occasional success, they have not always been worth the cost and usually involve hidden costs to others in the area. The plants thus attracted, often in "footloose" industries, may contribute little to the community, and may well move out once the subsidy runs out, or once the local community is outbid.

Nevertheless there is a significant difference in principle between a local subsidy to attract industry and a national program for subsidizing industry in labor surplus areas. Communities may compete in many ways: in tax rates, in utility rates, in the quality of their schools or their cultural life, in labor costs, in other costs and prices and in a favorable job-making climate. Tax concessions to new industry or provision of a building "rent-free" is one of many ways in which a community may compete with others. State and national legislation on wages and on prices, unionization and industrywide collective bargaining, the growth of nation-wide list prices for many products, the decline of local taxes in the over-all tax picture, all reduce the scope for competition between areas. Thus tax concessions and direct subsidies may be relied upon to compensate for the lack of flexibility in other economic dimensions. The community which pays for the subsidy also enjoys the benefits of any resulting industrial growth. But in the case of U. S. Treasury subsidies, areas within one statistical category get the benefits of industrial expansion, while areas in another category bear the costs of industrial loss or diminished growth and also pay part of the subsidy.

Labor Mobility

By and large labor mobility between industries, occupations, and areas is high in our economy. In manufacturing in years of high employment, monthly voluntary quits total 2% of the labor force. This rate of turnover, if guided by adequate information on job opportunities, generally is high enough to take care of large scale structural displacement by the normal process of attrition. In the economy as a whole, according to one study there are some 111/2 million job shifts every year, involving 81/2 million different persons. Almost half of these shifts are to a different industry and a different occupation; another 20% to a different industry, but to the same type of job; an additional 8% to a different type of job in the same industry. Even these figures do not reveal the full extent of occupational mobility; many workers change their type of work without changing employers. Residential mobility is also high. Every year 11 million people move to a different county, half of them crossing state lines.

Labor immobility is a special case, rather than a general problem. Labor in communities and areas heavily dependent on a single dominant industry, with limited alternative employment opportunities, may be slow to move as that industry declines. Information on job opportunities within the labor market is much more easily obtained by the unemployed worker than information on distant openings. The costs of seeking a job near home are small; the costs of seeking employment hundreds of miles away may be forbidding to the long-term unemployed who have exhausted their financial resources.

Older age-groups are relatively immobile. They are more likely to own a home, in which they live without cash outlays for living quarters, and which provides them with vegetables and other food which they raise themselves. In order to sell their home they may have to take a loss; in a new community they would have to pay cash rent. Of course we all favor home ownership; nevertheless ownership is a bar to mobility.

Older workers may also be immobilized by seniority and pension rights, vacation and sick benefits which they are reluctant to forego. There is much to be said for seniority (if not rigid), for pensions, and for other types of fringe benefits, but they tend to reduce labor mobility and indeed that is their purpose. Many think that the solution here lies in less emphasis on such labor-immobilizing factors so that the worker does not sacrifice so much by seeking employment elsewhere when it is to his advantage to shift.

Older workers are less mobile also because they receive higher pay, possess greater skills, and consequently are likely to suffer larger cuts in pay when they are forced to move out of a depressed industry or occupation. They also face greater difficulties in re-employment on account of age and thus are more reluctant to cut the ties to their former industry and employer. Several states have passed legislation forbidding hiring discrimination on the basis of age. Since the number of workers over 45, and even their percentage of the total labor force, is on the rise, it is important to consider special problems of improving mobility, retraining, and re-employment prospects for older workers.

The argument is often made that we should not force people to leave communities in which they have deep roots for jobs elsewhere. On the other hand, neither is the public obligated to subsidize forever individual attachments or fears of change. We are a nation on the move, as we have been for many generations. It is questionable that residents would be happier staying to watch their old community die, as must happen to many a one-industry town and many a town based on exhausted natural resources or other uneconomic foundation. They might be happier following their neighbors and children in forging a new life in another growing, viable community.

Economic Growth

As the population of working age increases, more jobs must be created to prevent a rising trend of unemployment. As productivity of labor and capital continues to rise, it takes



fewer workers to produce a given real output. Thus real output must expand and new jobs must be created to prevent rising productivity from creating rising unemployment. We should not accept the view, however, that a specific rate of growth is required to stabilize the rate of unemployment; that it is possible to add the annual increment in labor productivity and the estimated annual net increase in the labor force, and come up with the numerical rate of growth in real GNP which stabilizes unemployment.

In the first place, the annual increment in the civilian labor force is highly variable, ranging in the 1950's from a decline of 215,000 in 1951 to an increase of 1,682,000 in 1956. To some extent the annual increments respond to levels of business activity and job opportunities; there is nothing "given" about the rate of increase in the labor force. A substantial and growing number can be classed as "discretionary" workers, "discretionary" members of the labor force. Because of the variability in the rate of growth of the labor force, it makes more sense to try to stabilize the level of employment, allowing for a small annual increase, rather than to stabilize the rate of unemployment. To achieve the latter could mean considerable instability in the level of employment and business activity.

In the second place, the annual rate of increase in manhour productivity is also variable, influenced by the level of economic activity, and subject to some control. In the long run all growth in real income per capita is the result of increasing output per unit of input—human and other energy, management, technology, etc. We should worry more about productivity and less about economic growth.

Our efforts should be concentrated on imploying productivity and on re-employing workers displaced by technological progress and changing demands. If we do these things, the rate of our economic growth will take care of itself. Growth comes not from legislation but from innovation. In terms of policy, we should encourage research, development and economic freedom, which create the basis for growth. This means better education from the kindergarten to the graduate school; it means improvements in the administration of patent policy; it means wider public recognition of the contributions of inventors, researchers and business managers; it means im-

proved dissemination of technical knowledge, including a review of security regulation on this subject.

We require also more investment and particularly more venture capital, the catalyst which activates loan capital. This means primarily tax reform and tax reduction, but also maintenance of economic stability and a climate of confidence. Adequate growth in investment is difficult to reconcile with a declining share of profits after tax as a percentage of national income, a decline from nearly 8% in 1947-50 to less than 5% since 1957. There must be incentives for new investment, and these incentives are expected profits on investment, after taxes.

Training and retraining of workers complements new capital investment in raising productivity and also facilitates reemployment of workers displaced by economic progress. Other ways of increasing labor mobility should also be considered, with particular reference to older workers and workers in seriously distressed areas and industries. Every effort should be made to reduce barriers to mobility of labor and capital from less productive to more productive uses, whether these barriers are imposed by government, by unions or by management.

Summary

Structural unemployment, depressed areas and automation are not new. Numerous suggestions have been previously cited for coping with these problems. Subsidy of depressed areas will neither solve the problems nor help the country. Increased labor mobility and improved training and retraining efforts are more to the point.

The most promising long-run approach lies in private and public policies mitigating general economic instability (recessions) and stimulating optimum economic growth under competition, flexibility, confidence and price level stability.

Some more specific recommendations are listed below:

An improved flow of information, including:

1. Collection of improved information on current job openings, by skill, number and locality;

2. Utilization of this information by the United States Employment Service and other agencies concerned with placing unemployed workers; and

3. Advance notice by employers of plans for mechanization or automation which will displace substantial numbers of workers, combined with announcement of the alternatives available to the displaced workers and the steps which management is undertaking to minimize the problems.

Improved training and retraining, including:

1. Better local vocational counseling and guidance, on the basis of prospective supply-demand situations for various skills and occupations:

2. Restructuring vocational curricula in high schools and elsewhere to train workers for the skills of the future, rather than the skills of the past, this entailing training and retraining vocational teachers as well as changing curricula; and

3. Expanded efforts by employers and unions to retrain workers on a continuing basis as a means of averting skill obsolescence and to minimize structural unemployment by retraining displaced workers for needed skills where feasible.

Increased labor mobility, through better information on job opportunities and through training to prepare for skills in demand, as mentioned above, and by reducing obstacles to labor mobility. These obstacles include:

1. Sacrifice of seniority rights and other fringe benefits through changing employers;

2. Severe financial losses or costs evolved in migration to other localities; and

3. Barriers to re-employment of older workers.

Greater flexibility of costs, particularly of wage costs, including

1. Reduction of wage cost rigidities introduced by statute or decree;

2. Adaptation of collective bargaining procedures to the special needs and conditions of depressed areas; and

3. Moderation of union wage and fringe demands, positions on work rules and featherbedding in order to minimize artificial inducements to substitute machinery for labor on one hand, and to facilitate technological progress which is soundly conceived, on the other.

An adequate rate of investment in new jobs, to accommodate the growth in the labor force and to facilitate re-employment of workers displaced by progress. Policies toward this end include:

1. Effective fiscal and monetary policies to prevent unsustainable booms and to reduce the severity, duration, and frequency of recessions;

2. Stimulation of new investment, and particularly of venture capital, through tax reduction and reform; and

3. Stimulation of research and development.





Selected Additional Readings

Economic Lessons of Postwar Recession. (0053) Reviews experience of postwar recessions, with a view towards mitigating their frequency and severty. 31 pages. 50¢.

The Economics of Money Supply. (0060) Explains what money is, where it comes from, the remarkable processes by which bank credit enters and leaves the economic system in response to demand; describes the type of gold standard in force today; points out some of the more important current monetary questions. 49 pages. 50ϕ .

The Power of Choice. (0815) A statement of the economic, political, and ethical principles underlying the competitive market system. 30 pages. 50ϕ .

The Mechanics of Inflation. (0054) A painstaking analysis of inflation process, providing both a background and insight necessary for an understanding of how different forces work in concert in an inflationary situation. 69 pages. \$1.00.

Prices, Profits and Wages. (0387) Analyzes the interrelationships which are the topic of so much conflict in our society. 30 pages. 50ϕ .

Profits—Gomething for Everyone. (0059) Brings out new ideas about the nature and measurement of profits. Shows how and why they shrink due to competition and innovation. Discusses profit components in rents, wages and salaries. 35 pages. 50¢.

The Goals of Economic Policy. (0072) A discussion of the aims of national economic policy. Identifies the 5 economic goals; their harmony and conflict. 40 pages. 50¢.

Productivity and Wage Settlements. (0078) An analysis of the uses and abuses of productivity measurements in union negotiations and wage determinations. 15 pages. 50¢.

Getting and Holding Good Employers. (0072) Analyzes the basic factors which block local economic growth. 28 pages. 50¢.



The Promise of Economic Growth: Prospects, Costs, Conditions. (0079) Analysis of different meanings of growth, requirements for growth, and the costs and disruptive effects as well as the gains. 55 pages. \$1.00.

The United States Balance of Payments Position. (0080). A step-by-step analysis of the causes of our imbalance, of the consequences of alternative approaches toward correcting it, of the need for action, and of future prospects. 57 pages. \$1.00.

Economic Change and Adjustment. (0089) An analysis of the nature of economic change in our economy, of alterntive reactions to change, and of policies facilitating and policies obstructing economic change and adjustment. 52 pages. \$1.00.

Criteria for Government Spending (0091) Develops guidelines for efficiency and economy in government spending, and for division of functions between private and public sectors, and between levels of government. 35 pages. 50ϕ .

Meeting Foreign Competition At Home and Abroad. (0076) Proceedings of the first 1961 Economic Institute (February 1961). Authoritative speeches and answers to what business and government can do. 65 pages. \$1.00.

Tax Reform: Why and How? (0088) Proceedings of the third 1961 Economic Institute (October 1961). Authoritative speeches, discussions, and questions and answers about many aspects of the problem of Federal, state and local tax reform. 103 pages \$1.00.

Unemployment—the Nature of the Challenge. (0804) Identifies various kinds of unemployment, comments on the demand-deficiency vs. structural unemployment issue, and considers proposed solutions to the unemployment problem. 25 pp. (50ϕ)



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